

# Project 360: An intervention to address victim-police engagement in repeat domestic violence cases

## Final policy report

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May 2019

***How to cite this policy report***

Foureaux Koppensteiner, Martin, Jesse Matheson, and Réka Plugor, 2019. 'Project 360: An intervention to address victim-police engagement in repeat domestic violence cases,' Department of Economics Policy Brief, Sheffield University.

## Acknowledgements

Project 360 is funded by the Ministry of Justice and the Office of the Leicestershire Police and Crime Commissioner.

The design and implementation of Project 360 was a cooperative effort by the authors of this study, Leicestershire Police, Leicester City Council, Leicestershire County Council and Rutland County Council.

The following participants played major roles in the implementation of Project 360:

Detective Constable Mark Brennan	Leicestershire Police
Detective Superintendent Jon Brown	Leicestershire Police
Stephanie McBurney	Leicester City Council
James Fox	Leicestershire County Council
Debbie Hughes	Living Without Abuse
Detective Inspector Mark Parish	Leicestershire Police

We also thank Eliot Button, Corinne Crosbourne, Pooja Pattni and Chloe Rawson for their excellent research assistance.

## Disclaimer

The interpretation of results, suggested implications, conclusions and recommendations in this document are those of the authors and may not reflect the views of Leicestershire Police, Leicester City Council, Leicestershire County Council, Rutland County Council or the University of Leicester.

## Ethical approval

Procedures for the evaluation of Project 360 have received approval from the University of Leicester Ethics Committee under the following reference codes: mk332-5e3e; jm464-d28b; jm464-6fe8; jm464-6eb3; jm464-2301; 713-jm464-economics; 2926-jm464-economics.

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## Executive summary

This executive summary contains the main findings from the evaluation of Project 360.

Project 360 is a secondary responder programme in the Leicestershire Police Force area, in which *engagement workers*, with an expertise in assisting victims of domestic violence, work from within the police force. Following a reported domestic incident, the engagement worker contacts the victims via telephone within 24 hours and acts as a mediator between the police and local domestic violence support services. Engagement workers provide information about existing local services, and provide victims with assistance and referrals to access services. Rapid phone contact is often followed up by face-to-face visits between engagement workers and victims to provide further assistance.

The integration of *engagement workers* within the police force is a key feature of Project 360. This is important for three reasons:

- **Rapid response:** New incidents are reported daily and this information is shared with engagement workers. The intervention aims at contacting victims within 24 hours of a police callout.
- **Enhanced information:** Engagement workers have access to all information previously recorded by police with respect to victims and perpetrators. This allows engagement workers to better assess the risk associated with specific victims and perpetrators and to design a bespoke intervention.
- **Embedding of services with police:** Victims may believe the police are better able to assist them than other non-police support agencies, giving extra authority to the engagement workers.

1,015 cases, over a six-month period, have been covered by the Project 360 trial. The random allocation of cases to treatment and control groups ensures that through the quantitative analysis, the programme's *causal effects* are estimated. For the evaluation of the programme, we have collected data from police database administrative sources and from a victim survey covering 214 victims (110 from the treatment group and 104 from the control group).

The main findings of the evaluation are summarised below. The term 'initial incident' refers to the police callout that leads to the addition of a case to the subject pool.

- **The intervention led to an increase in victim satisfaction with police services.** Victims in the treatment group were 43% less likely to report being dissatisfied with the police handling of their case than victims in the control group.
- **The intervention led to a significant increase in willingness to report future incidents.** The treatment group was 42% more likely than the control group to say that their willingness to report a future incident had increased.
- **The intervention resulted in victims being more likely to take actions to change their situation.** Relative to the control group, victims in the treatment group were significantly more likely to report having visited their general practitioner, were more likely to have accessed a domestic violence support service and were 34% less likely to be currently in contact with the perpetrator.
- **The intervention was associated with greater victim stress in the short run.** Relative to just before the initial incident, victims in the treatment group were 31% less likely to report improved *stress levels* and 40% more likely to report worsening *stress levels* than victims in the control group. Victims in the treatment group were also more likely to report a worsening of their quality of *sleep* and have poorer outcomes for *life control* and *mental health*. These findings are consistent with the increased willingness of victims to take actions to change their situation. Separating from an abusive partner or making other major life changes were expected to be stressful.
- **The intervention was associated with improved family life and quality of life overall.** Despite the findings in relation to stress, measures of *quality of family life* and *quality of life overall* both significantly improved for the treatment group relative to the control group. Victims in the treatment group were 22% more likely than victims in the control group to report quality of life improvements.
- **The intervention led to an unexpected decrease in the provision of witness statements to police by victims.** Victims in the treatment group were 21% less likely to provide a witness statement than victims in the control group. Consistent with this being attributable to the intervention, the decline was found only among victims who provided statements after the initial police visit.
- **The intervention is not associated with a change in criminal sanctions taken against perpetrators.** Despite the significant change in victim provision of statements, the

intervention did not lead to a change in perpetrator arrest by police, charges by the crown prosecution service, or sentencing by the courts.

- **The intervention was associated with fewer statements being retracted by victims.** Of those who made a statement, victims in the treatment group were 27% less likely to retract than victims in the control group.
- **The intervention was not associated with a notable change in repeat offences over a one-year period.** There was no significant change in the number of instances of domestic violence recorded by police. However, we found weak evidence to suggest that the severity of future instances (as measured by risk assessment and arrests) was lower for the treatment group than for the control group.

These results suggest that the Project 360 intervention had a positive effect on a number of victim outcomes and on the victims' perceptions of police handling of their cases.

Based on the incremental costs incurred during the trial, we estimated a cost of £174 per victim engagement for the Project 360 intervention.

The authors of this report make five recommendations based on the analysis for the design and implementation of second-responder programmes based on Project 360.

**Recommendation 1:** A second responder programme, modelled around Project 360, should be rolled out as standard practice in police forces that would like to see improvements in the relationship between police and victims of domestic violence, particularly in cases categorised at standard and medium risk.

**Recommendation 2:** The intervention should be rolled out to repeat victims who have experienced fewer than three previous instances in a 365-day period. This would allow for police-victim relationships to be strengthened earlier in the cycle of domestic violence.

**Recommendation 3:** In cases in which children are involved, more focus should be placed on future implementations to work with schools. Working with schools provides a real opportunity for change. School administrators stated in interviews that they had a real need for more information and cooperation to identify and assist students who are exposed to domestic violence at home. The engagement workers, with access to information from police

and local authorities, can provide this information in a secure and standardised framework to each of the schools' Designated Senior Person.

**Recommendation 4:** The intervention should be available anytime a household experiences domestic violence. The trial was only designed to estimate the impact of a single intervention. It is reasonable to expect that through continuous work with engagement workers, we may see a change in patterns of abuse and crime. Many of these households have a long history of abuse, and they may need multiple attempts of engagement over time provided through an intervention such as Project 360.

**Recommendation 5:** Efforts should be made to continue the experimentally designed study of future interventions. There is still much to be learned about how policies can be designed in the future to address better the needs of victims of domestic violence. Randomised control trials provide a gold-standard to provide policy-relevant, and scientifically robust, evaluation. Implementing innovative policies and interventions without a rigorous evaluation in place is a serious missed opportunity to identify what works in addressing domestic violence.



## 1. Project 360 background information

In the Leicestershire Police Force area (covering Leicester City, Leicestershire and the Rutland Council area) 17,396 domestic offences and incidents were reported during the one-year period beginning April 2013. Approximately 20% these reports to Leicestershire Police involved repeat victims. This means that about seven victims daily experienced three or more reported incidents of domestic violence over a 365-day period.

Domestic violence is estimated to have a direct cost to the UK public purse in excess of £5.7 billion every year and to account for 23% of public health expenditure (Walby, 2004, 2009). Beyond the direct cost of domestic violence due to police involvement, judicial procedures and health expenditure, there are difficult-to-quantify indirect costs, including emotional trauma and the long-term effect on children in these families.

Project 360 can be seen as a response to the HMIC report 'Everyone's business: Improving the police response to domestic abuse' (HMIC, 2014). The report states that there is a lack of expertise on the part of police in the UK when it comes to dealing with victims of domestic violence:

Officers lacking the skills and knowledge necessary to engage confidently and competently with victims of domestic abuse. (pg. 7)

Victims told HMIC that they did not always feel believed or that they were being taken seriously by the police. (pg. 9)

A lack of understanding of many complex factors is, at least, in part responsible for the poor attitudes of police officers. (pg. 53)

The design, implementation and running of Project 360 are based on a collaboration between Leicestershire Police and the local authorities aimed at addressing these concerns by using secondary responders – *engagement workers* – with an expertise in assisting victims of domestic violence. The engagement worker acts as a mediator between the initial police visit and the available support services.

In addition to directly addressing the needs of repeat victims of domestic violence, Project 360 addresses wider concerns outlined in the HMIC report. First, although the intervention specifically targets repeat victims of domestic violence, the design of Project 360 does not preclude the use of the intervention more generally in all cases of domestic violence that are categorised as standard or medium risk. Second, the intervention includes a component specifically to support children in households which have experienced domestic violence, addressing another concern expressed in the original HMIC report.<sup>1</sup>

The authors of this study conducted an independent evaluation of Project 360, the results of which are reported here.

The assessment of the effectiveness of the Project 360 intervention, as in the case of any domestic violence study, is complicated by the inherent difficulty in determining what an ‘improvement’ in domestic violence looks like based on the data that is available. To illustrate this complexity, consider interpreting an observed increase in the reporting of domestic violence following an intervention.<sup>2</sup> This may be working through one of two opposing channels: the intervention leads to an increase in abuse – as suggested in Davis, Weisburd and Hamilton (2008) – or the intervention leads to an increase in empowerment and willingness to report abuse on the part of the victim – as suggested in Davis and Taylor (1997). Clearly, knowing which of these channels underlies such a result is important.

To address this, we utilise data from a number of sources. The first comes from a victim survey designed for the purpose of the Project 360 evaluation. This survey provides victim-reported information reflecting the change since the initial police visit in safety and well-being and attitudes towards the police. We also use administrative information from Leicestershire Police, from which we collect data on the demographic characteristics of victims and perpetrators, the provision of statements to police by victims and repeat police visits over a one-year period following the initial incident. In addition, we collect administrative

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<sup>1</sup> According to the HMIC, a separate inspection on child protection by HMIC has since being published. <https://www.justiceinspectorates.gov.uk/hmic/wp-content/uploads/in-harms-way.pdf>

<sup>2</sup> As was found in previous randomised-control studies (Davis and Taylor, 1997; Davis, Weisburd and Hamilton, 2008).



**Figure 1:** Leicestershire Police Force Area

information on the outcome of each case from the Police National Database. These quantitative data are supplemented with information from interviews with engagement workers and schools.

A number of studies have looked at interventions in domestic violence. These include the research on projects such as Project CARA<sup>3</sup> in the UK. Unlike CARA, Project 360 is an intervention directed at victims of domestic violence, similar to the interventions analysed in Casey, Berkman, Stover, Gill, Durso and Marans (2007); Stovers, Berkman, Desai and Marans

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<sup>3</sup> CARA is a perpetrator-focused intervention run by the Hampshire Constabulary.

(2010); Davis and Taylor (1997) and Davis, Weisburd and Hamilton (2007). Of these, only the interventions in Davis and Taylor (1997) and Davis, Weisburd and Hamilton (2007) were, like Project 360, implemented as randomised-control trials. The lack of randomisation in the remaining studies means that results can only, at best, be suggestive of a programme effect. Because Project 360 is a randomised-control trial, we estimate unbiased causal effects of the programme on the selected outcomes (Holland, 1986).

The evaluation of Project 360 significantly contributes to the evidence base over and above the randomised studies of Davis and Taylor (1997) and Davis, Weisburd and Hamilton (2007):

- ***The design of the Project 360 intervention is fundamentally different*** to previously studied interventions. A key characteristic of Project 360 is the embedding of engagement workers within the police force. This links experts in victim support (i.e. the engagement workers) with information about cases, victims and perpetrators as the cases are reported, and this information is readily available to the engagement workers. This ensures that victims can be provided with timely and relevant assistance in accessing follow-up support.
- ***The Project 360 intervention does not involve perpetrators.*** Previously studied interventions involved contact with both the victim and the perpetrator. In some cases, this appears to have exacerbated tensions in the household, possibly leading to more violence.
- ***The evaluation of Project 360 considers a wider range of outcomes.*** Previous studies focused on repeat police call-outs, which have an ambiguous interpretation. In addition to repeat police call-outs, we report results from victim follow-up surveys and detailed results for statement provision.
- ***This is the first randomised-control study of this kind in the UK.*** It also constitutes one of the largest randomised-control studies ever conducted on crime.

## 2. Experimental design and evaluation

The Project 360 intervention is implemented as a randomised-control trial (RCT). The strength of the RCT design for policy evaluation is that, unlike interventions that are allocated based on voluntary subject participation or need (as determined by a third party), randomisation

ensures that whether an individual receives access to the intervention is uncorrelated with the characteristics of individuals that may confound the effects of the programme.<sup>4</sup> The treatment effects reported here, therefore, can be interpreted as causal effects of the Project 360 intervention.

### ***Random assignment of the intervention***

When Leicestershire Police are called out to a domestic incident, they record the incident and details of the household on a *Domestic Incident and Vulnerable Child Working Sheet*. The information from this working sheet is recorded in a domestic incident report in the Leicestershire Police database and assigned a case number. An automated workbook, designed by University of Leicester researchers and the Leicestershire Police IT services team, searched through the recorded incidents and recovered all domestic cases. The following conditions were applied:

1. The victim of the current incidence had shown up in at least two other reports and fewer than six other reports in the prior 365 days.
2. The victim is identified as *standard* or *medium* risk from the DASH assessment.
3. The victim had not shown up in the Project 360 subject pool previously (as either a treatment or control group constituent).

The workbook was automatically updated every 24 hours, and randomly allocated (with a 50% probability) new cases meeting the above criteria into either the *treatment group* or the *control group*. The Project 360 engagement team received case details and victim contact information for all cases in the treatment group but did not receive information for cases in the control group. The incident leading to a case being allocated to either group in the subject pool is referred to throughout this document as the *initial incident*.

### ***Current procedure***

The current police procedure for domestic violence call-outs is provided to victims assigned to both the treatment group and the control group. The current procedure for victims

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<sup>4</sup> For more details on the use of randomisation in evaluation studies, see Manski (2007), Angrist (2006), Holland (1986) and Imbens and Wooldridge (2009).

identified as medium and standard risk (according to the DASH assessment)<sup>5</sup> is to provide the victim with contact information for Leicester, Leicestershire or Rutland domestic violence victim services. If a victim is identified as high risk, the officer will typically make a referral to the Domestic Abuse Support Team (DAST). DAST is an integrated team of support workers within Leicestershire police.

### ***The intervention***

The Project 360 intervention is offered to all subjects in the treatment group. The main points of the intervention are summarised here. A flow diagram describing the complete intervention is presented in Appendix 2.

Each morning, engagement workers are allocated their new cases. They start by reviewing the police report and the Domestic Incident and Vulnerable Children Working Sheet for each case. Further information can be gathered on the history or reported incidents and other crimes for the victim and the perpetrator from police databases. After an initial investigation, the engagement worker contacts the victims by telephone. The project aims to make first contact within 24 hours of the incident.

Once initial contact has been made, the engagement worker will offer to provide further assistance to the victim. Further assistance can take the form of:

- Informing the victim of their legal options and the support services available
- Providing referrals to any support services which the victim would like to access
- Helping to construct a 'planned escape' if the victim wishes to leave the perpetrator.

The intervention lasts approximately one week (this can vary according to victim needs).

If a child is in the household, the engagement worker will contact the Designated Senior Person at the child's school (most commonly the child safeguarding officer or head teacher). The school is informed that a domestic disturbance has taken place, but is not provided with specific details regarding the incident.

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<sup>5</sup> DASH stands for domestic abuse, stalking and harassment. This is a standardised risk assessment tool, comprising 27 questions, brought into use across UK police services in 2009. Assessments are classified into three risk levels: Standard (1), Medium (2) and High (3).

### 3. Interviews with engagement workers

Face-to-face interviews were conducted with the Project 360 engagement workers. The primary purpose of these interviews was to gather information with respect to how the intervention was implemented, the impact of the programme on victims as perceived by the engagement workers, the benefits of the programme relative to existing services as perceived by the workers, and any potential changes that would allow engagement workers to more effectively assist victims.

#### *Benefits of the intervention over existing services*

Engagement workers discussed their belief that the Project 360 intervention provides an effective way of assisting victims of domestic violence over and above existing services. They cited a novel feature of the programme: the full integration of a victim-targeted secondary response with police services. Three channels through which integration of services may be important were identified:

- **Enhanced information:** an engagement worker has access to all information previously recorded by police with respect to victims and perpetrators through a number of police databases. This ensures that workers can assess the risk involved in visiting a victim before they proceed. As one worker stated: 'In previous [DV] work I was trying to do my job completely blind.'
- **Rapid response:** the team receives information on new cases updated daily. No referrals from a third party are needed and the engagement workers can take the initiative in making initial contact. This ensures that workers are aware of new cases and can begin the intervention within 24 hours of the initial report being made.
- **Services embedded with police:** Engagement workers believe that the affiliation with the police force makes victims more responsive and willing to listen relative to their previous experience working with non-police victim support agencies.

Engagement workers felt that the programme also allowed them to deliver emotional support to victims shortly after an incident occurred.

Project 360 engagement workers assist and coordinate access to services for victims as well as ensure that they are taken care of while they wait for access to be provided.

**4. Interviews with schools**

Face-to-face interviews were conducted with a Designated Senior Person (DSP) in eight different key stage 2 (KS2) schools across Leicester and Leicestershire. The schools chosen for interview were large KS2 schools in areas with relatively high numbers of police call-outs for domestic incidents. All interviewed DSPs reported being aware of pupils who had experienced domestic violence in the current school year.

The primary purpose of these interviews was to gather information on how schools might make use of the information provided by Project 360 and what other services would be useful in supporting schools in their child protection role.

***The role of schools in domestic violence support***

All DSPs stated that the school played an important role in supporting children who have experienced domestic violence. All schools interviewed had policies and formal procedures in place, meeting the criteria set out by city and county councils. However, many DSPs reported uncertainty about general strategies for assisting children who experience domestic violence. Vague terms, such as 'offering pastoral care' are used to describe the support that will be given to children but few have tangible strategies. Almost all DSPs described the actual interventions that would be used to offer support as being on a case-by-case basis.

***Schools and interaction with domestic violence support services***

When asked about what additional services outside agencies could offer to assist schools with providing support to children, three services gaps were identified. These gaps were identified by all DSPs. 1) Lack of information prevents schools from identifying pupils from households in which, due to domestic violence, police or other services are currently involved. 2) In cases where schools have informed an outside agency, such as social services or police, there was a lack of consistency in follow-up information on the status of the affected pupils. 3) Schools felt they lacked a consistent, named, contact person whom they could contact for information or guidance or report an incident of concern in cases where a pupil was thought to be exposed to domestic violence at home.

The school interviews suggest that there is a real opportunity for the Project 360 engagement worker to assist schools in supporting pupils who have experienced domestic violence.



## 5. Characteristics of the sample

Key features of the cases in the Project 360 subject pool are summarised here. Detailed tables are reported in Appendix 1. The main points from this section are summarised in the caption below.

### ***Caption 1: Sample characteristics***

- The final sample consists of 1,015 cases; 510 treatment and 505 control ones.
- The survey response rates (21.6% for the treatment and 20.6% for the control) do not significantly differ between treatment and control groups.
- Observed characteristics do not significantly differ between treatment and control groups. This is consistent with the successful randomisation of the allocation of cases between the two groups.

### ***Sample size***

The final sample consists of 1,015 cases corresponding to unique victims (see Table 1), with 510 cases allocated to the treatment group and 505 cases allocated to the control group.

The Victim Survey covers 110 victims from the treatment group and 104 victims from the control group, corresponding to response rates of 21.6% and 20.6%. The difference between the response rates for the two groups is not statistically significant, meaning that the treatment group was not more likely to respond to the survey than the control group.

In Figure 2a and Figure 2b, we present the number of cases in the study on a per capita basis (per 10,000 residents) throughout Leicestershire and Rutland and the city of Leicester. Figure 2a reveals considerable variation in the number of cases per capita, with districts in the north of the county having between 7.7 and 8.1 cases per capita, and districts in the south having between 5.1 and 6.0 cases per capita.

Notably, the number of cases per capita in Leicester city is almost twice as high as the next highest district. When looking at the ward level within the city of Leicester (Figure 2b), there also is considerable variation. The highest number per capita in New Parks, at 35.6, is more than seven times the lowest number per capita in Knighton, at 4.8.

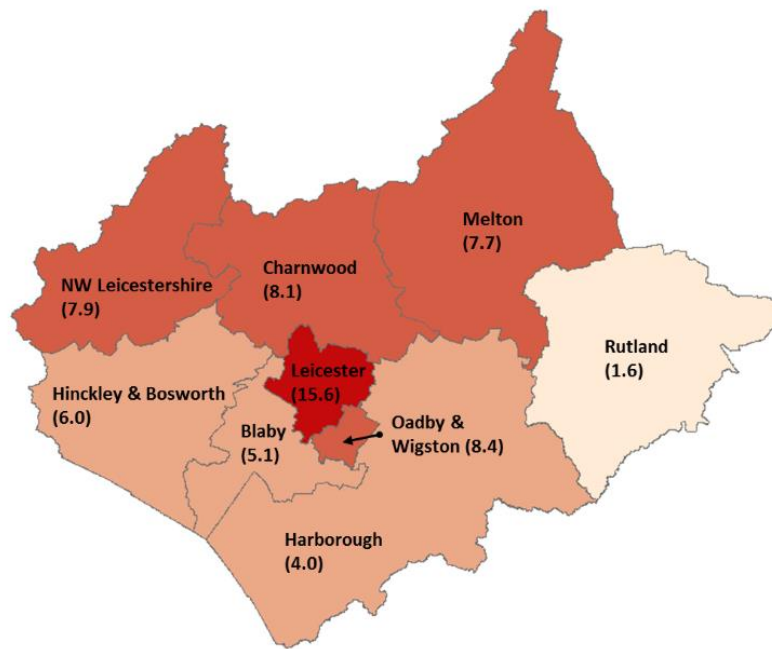


Figure 2a: Study cases per in study 10,000 households, Leicestershire County

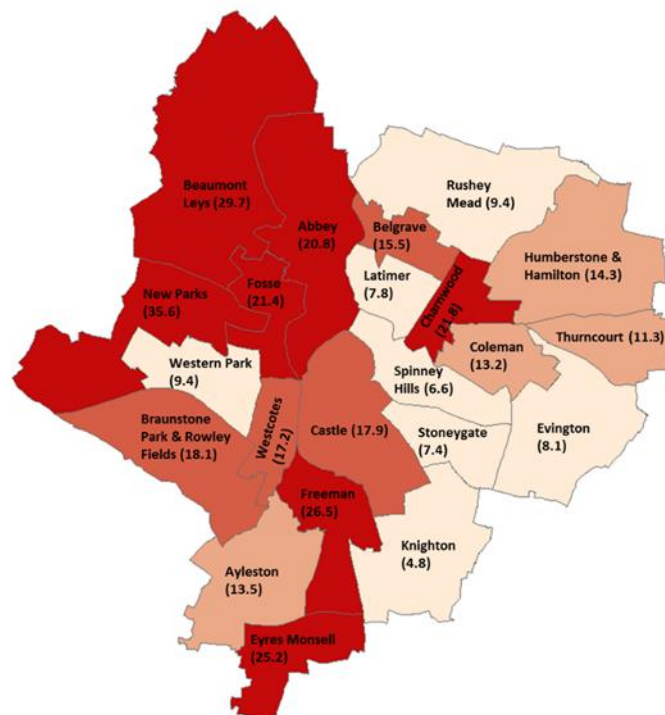


Figure 2b: Study cases per in study 10,000 households, Leicester City

Note: The study cases reflect all cases over a six-month period for which the victim has been present in three to six previous cases in the previous 365-day period.

Summary statistics describing the average characteristics of the treatment and control group are also analysed (see Table 3). In addition to providing information about the make-up of these cases, these summary statistics allow us to test whether the randomisation of treatment was successful. If the randomisation was not implemented correctly, we expect that there may be differences in observable predetermined characteristics between the treatment and the control group.

### ***Victim, perpetrator and household characteristics***

Victims are disproportionately likely to be female and perpetrators disproportionately likely to be male. 87% of victims and 14% of perpetrators are female in the treatment and control groups. The average age is 34 for victims and 33 for perpetrators. The vast majority of both victims and perpetrators report themselves to be white. We find that victims have reported ethnicities for white, Asian and black of 82.2% (83.3%), 11.0% (9.7%) and 6.8% (6.9%) in the treatment group (control group) respectively. These ethnicity percentages are similar for perpetrators, and are consistent with population counts reported by the Office for National Statistics for the Leicester, Leicestershire and Rutland population. Based on the 2011 census white, Asian and black ethnicities make up 83.1%, 12.5% and 1.7% of the Leicester, Leicestershire and Rutland population.<sup>6</sup>

58.6% and 57.0% of households in the treatment and control group have children. The average number of children in households with children is 1.92 and 1.98 for the treatment group and the control group respectively.

The average number of police callouts in the previous 365 days (not including the most recent) is 2.3 for victims in both the treatment and control groups, and the average DASH<sup>7</sup> assessment is 1.28 for both the treatment and control groups. This suggests that the average risk level facing victims in each of these groups is very similar.

In the majority of reported cases, the perpetrator and victim have a close relationship. In 76% and 80% of cases, for the treatment group and the control group, the victim and the

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<sup>6</sup> The census values are taken from reference table KS201UK, available at

<http://www.ons.gov.uk/ons/datasets-and-tables/index.html?pageSize=50&sortBy=none&sortDirection=none&newquery=population+ethnicity>

<sup>7</sup> DASH assessments are captured by a 1-3 scoring system: 1 is standard risk level, 2 is medium risk level and 3 is high risk level.

perpetrator are either current partners or ex-partners. In another 22% and 20% of cases, the victim and perpetrator are either siblings or a parent and child. Fewer than 3% of cases in each group involve non-family or non-intimate abuse.

Consistent with expectations, in the majority of cases, the reported differences in characteristics between the treatment and control group are not statistically significant.<sup>8</sup> However, there are a few differences between the treatment group and the control group that are worth noting. We find that perpetrators in the treatment group are less likely to be unemployed and have, on average, one fewer registered case than perpetrators in the control. We also find that victims and perpetrators are slightly more likely to be living together in the control group than in the treatment group. However, the remaining characteristics suggest that treatment and control groups are indeed very similar. For example, police call-outs and the DASH assessments are almost identical between groups, suggesting that there is not a significant difference in the severity of domestic violence within the average household between groups. We, therefore, feel comfortable in concluding that any differences we see in post-treatment outcomes between groups should reflect the treatment itself, rather than a spurious correlation attributable to differences in household or victim characteristics.

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<sup>8</sup> Statistical significance is evaluated at a 95% confidence level.

*Engagement in the treatment group****Caption 2: Engagement according to characteristics***

- 65% of contacted victims engaged with the Project 360 intervention.
- Cases in which the victim is female and the perpetrator is male are significantly more likely to engage than different victim-perpetrator sex combinations.
- Engagement is significantly higher in households where both the victim and perpetrator are employed relative to households where one or both are unemployed.
- Victims with a reported *Asian* ethnicity have significantly higher engagement rates than victims with *white* or *other* reported ethnicity.
- Engagement rates are significantly higher for victims in households with children than for victims in households without children.

We define a victim as having *engaged* with the Project 360 intervention if they had been contacted by a Project 360 engagement worker and they accepted some form of assistance. This assistance ranges from providing advice via a one-time phone conversation to a face-to-face meeting to construct an escape plan. While an effort was made to deliver the intervention to all victims assigned to the treatment group, just under 49% of treatment group victims had not engaged with Project 360. Of the victims that had not engaged, 57% were contacted by an engagement worker by phone, but were not interested in phone-based assistance or a face-to-face meeting. 43% were not contacted, as engagement workers were unable to make contact with victims given the information that was available. Among all victims whom the engagement worker was able to contact, the engagement rate was 65%.

In Table 4, we document the *engagement rates* for victims in the treatment group, stratified according to the different characteristics of the victim and the perpetrator, as well as characteristics of the household. Female victims have higher engagement rates than male victims. Engagement is highest, at 54.3%, when the victim is female and the perpetrator is male, and lowest, at 29.7, for male victims and female perpetrators. While engagement rates are not significantly different across different ages, young victim/perpetrator cases have notably a lower engagement rate, at 30.4%, than do older victim/perpetrator pairings, which have engagement rates greater than 50%.

There is a significant difference in engagement according to victim and perpetrator employment status. Unemployment, of either the victim or the perpetrator, is associated with lower engagement. The highest engagement rates, at 59.5%, are seen when both victim and perpetrator are employed and the lowest, at 39.8%, are when both the victim and perpetrator are unemployed.

In terms of ethnicity, we find the highest engagement rates for victims classified broadly as *Asian*,<sup>9</sup> at 71.4%. Rates for victims recorded as *white* or *other* were roughly consistent with the overall engagement rate of 50%. We find virtually no difference in engagement for intimate versus non-intimate cases.<sup>10</sup> There is a non-trivial difference in the size of the engagement rate between households in which the victim and perpetrator live together (53.4%) and those in which they do not (47.4%). However, we do not find that these two rates are statistically different. Finally, victims in a household with children (54.6% engagement) are more likely to engage than victims in a childless household (46.7% engagement).

## 6. Results from the victim survey

As part of the analysis, a victim follow-up survey was designed to solicit information from victims in both the treatment group and the control group. The survey was administered by the Leicestershire Police Service Improvement Department approximately one month after the initial incident (results reported in Tables 5, 6 and 7). The survey is designed to cover three different types of outcomes: the victim's perceived well-being, the actions the victim has taken since the initial incident and the satisfaction with the handling of the initial incident by the police. The main findings from the victim survey are summarised in Caption 3.

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<sup>9</sup> Asian here largely refers to ethnic identity arising from eastern Asian countries. When we look at a more detailed measure of self-declared ethnicity we find that of those recorded as *Asian*, 67% report their ethnicity as Indian, 9% report Pakistani and 1% report Bangladeshi. Of the remaining, 21% report another Asian origin and 2% declined to report.

<sup>10</sup> Non-intimate cases refer to domestic abuse incidents with household family members other than intimate partners.

### ***Survey design and implementation***

The Victim Survey was designed by the research team at the University of Leicester and Leicestershire Police specifically for the evaluation of Project 360. It was conducted by the

#### ***Caption 3: Victim survey results***

The victim follow-up survey was conducted one month after the initial police callout. It was designed for Project 360 and implemented by Leicestershire Police. The results suggest:

- **Police satisfaction increases for victims receiving the intervention.** 43% fewer victims in the treatment group report being dissatisfied with the police handling of the case associated with the initial incident.
- **Victims receiving the intervention are more likely to report future incidents.** The treatment group is 35% more likely than the control group to indicate their willingness to report a future incident has increased.
- **Victims receiving the intervention are more likely to take actions to change their situation.** Relative to the control group, victims in the treatment group are significantly more likely to have visited their general practitioner or the accident and emergency services, are more likely to have accessed a domestic violence support service since and are 34% less likely to be in current contact with the perpetrator.
- **The intervention is associated with greater victim stress in the short run.** Relative to just before the initial incident, victims in the treatment group are 34% less likely to report improved *stress levels* and 48% more likely to report worsening *stress levels*, than victims in the control group. Victims in the treatment group are also more likely to report a worsening of *sleep* and have poorer outcomes for *life control*.
- **The intervention is associated with improved family life and quality of life overall.** Despite the findings for stress, the measures of *quality of family life* and *quality of life overall* improved for the treatment group relative to the control group. Victims in the treatment group are 26% more likely to report quality of life improvements.

Leicestershire Police Service Improvement Department, which has extensive experience in collecting data from victim satisfaction surveys. The survey was implemented with the safety of victims being of the utmost priority when establishing contact and completing the survey over the phone. Only victims who supplied police officers with a safe telephone number were contacted. Upon contact, the interviewer asked for the name of the person answering the phone. If a person other than the victim answered the telephone, the interviewer would say that they are calling to conduct a survey and would try again later, without identifying themselves as police staff. If the victim answered the phone, interviewers asked if there was any possibility that this call could be overheard by the person who caused the harm; in such a case, they would arrange for the survey to be completed at another time. Before starting the survey, interviewers would first establish the precise location of the interviewee. In case the call was interrupted for any reason, a police response car would be sent to this location to establish whether the interviewee was safe.

### ***Results of the survey***

The results of the survey are reported in Tables 5, 6 and 7 in the Appendix. Each table documents the average responses for the treatment group, the average responses for the control group and the difference between the two. Questions that refer to an improvement or a worsening are framed relative to before the initial incident. The *Difference* column reports the difference in response averages between the treatment group and the control group, with the corresponding t-statistic reported in parentheses.<sup>11</sup> Asterisks are used to indicate that outcomes for the treatment group and the outcomes for the control group are statistically different.

### ***Police satisfaction***

This set of questions relates to the victims' satisfaction of the interaction with police involved in their case (Table 5). The results here are quite pronounced. Overall, a high proportion of victims reported being satisfied with police handling of their case (more than 70% in both the treatment and control group). However, satisfaction with police handling of the case is 6.7 percentage points higher (not statistically significant), and dissatisfaction is 8.9 percentage

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<sup>11</sup> The t-statistic corresponds to the null hypothesis that there is no difference between average responses for the treatment and the control groups.



points lower for victims in the treatment group than for victims in the control group. This is equivalent to a 56% decline in dissatisfaction compared to the mean. While we find an improvement related to the police handling of the initial incident, this effect does not seem to translate into an overall improvement in the general opinion of police for the treatment group relative to the control group. Victims were also asked whether there was a change in willingness to report future incidents to the police as a result of policing handling of the most recent incident. Relative to 'no change', a victim in the treatment group is 15.0 percentage points more likely to report an increase and 5.2 percentage points less likely to report a decrease in willingness to report than victims in the control group. This corresponds to a 35% increase in willingness to report future incidents to police.

These results point to a clear improvement in the victim's perception of how police handle their case. They further suggest a sizable improvement in the revealed willingness of victims to report future incidents. Because the majority of domestic abuse incidents are undetected and unreported to police, changes in the willingness to report incidents are essential to improving the police response to victims of domestic violence. As the random assignment of treatment happens only after the initial police callout, any observed difference in police satisfaction or willingness to report future incidents can be attributed to the interaction with the engagement worker.

### ***Actions taken***

The second set of questions broadly describes actions taken by the victim in response to a domestic incidence (see Table 6). Victims in the treatment group are 19.9 percentage points less likely to report being in current contact with the perpetrator than are victims in the control group. This constitutes a 41% reduction relative to the mean in both groups in the number of victims who are in contact with the perpetrator roughly one month after the incident.

The intervention also appears to have influenced victim willingness to seek help from other support services. Victims in the treatment group are 12.1 percentage points more likely to report having visited their general practitioner, a 35% difference compared to the mean, and 5 percentage points more likely to report having visited their accidents and emergency as result of the incident than victims in the control group (the latter is not a statistically

significant difference). Although we find no difference in victim reporting of confidence in accessing services, victims in the treatment group are 8.7 percentage points more likely to report having accessed at least one domestic support service than victims in the control group. This suggests that the support provided by Project 360 assisted victims in accessing existing services, in particular, visiting their GP. The results also seem to suggest that the improvements reported in taking actions for the treatment group are not due to victims not being aware of or not knowing how to access services, as we do not find any difference in the reported confidence to access services.

### ***Self-reported well-being***

The last set of questions broadly refers to self-reported perceived well-being (see Table 7). The results suggest that one month following the initial incident, victim safety, family life and quality of life overall are more likely to have increased for the treatment group relative to the control group (although, only quality of life overall is statistically significant). That victims in the treatment group are 12.7 percentage points less likely to report that their family life has worsened since the incident is consistent with the results in the previous section with respect to perpetrator contact; corresponding to a 62% improvement. Respondents in the treatment group are also 10.1 percentage points more likely to say that their quality of life overall has improved than a respondent in the control group.

Despite these encouraging results for quality of family life and overall quality of life, we also find that life control, stress level, quality of sleep and mental health worsened for the treatment group relative to the control group (only the stress level is statistically significant). A respondent in the treatment group is 17.1 percentage points less likely to say their stress levels have improved than a respondent in the control group, which corresponds to a 41% difference compared to the mean. These differences in reported stress levels shortly after an incident across the two groups are consistent with victims engaging with their history of domestic abuse and their increased levels of engagement with a number of specialist services. Although these results seem at first contradictory, given the victims higher propensity to engage in breaking away from a repeat perpetrator in the treatment group, it is possible that victims receiving treatment simultaneously report improvements in quality of life, family life and their personal safety, and increased stress levels.

**7. Results from administrative data****Collection of administrative data**

We collected administrative data from Leicestershire Police between November 2014 and November 2015. This data collection comprised searching in the CIS (Crime Information System) database for specific crime numbers, reading the full file for that specific case and recording relevant variables in a database. The data was collected in three stages.

In the initial data collection stage, we gathered the following information:

- Socio-demographic data about the victims, perpetrators and the children in the household.
- Data related to the domestic incident (date, classification)

In the second stage, we augmented the existing data by collecting the following information:

- Data related to the domestic incident (action taken by police, DASH risk assessment)
- History of police incidents for victims and perpetrators
- For those who received treatment, details about their engagement in the programme

In the third stage, we collected the following information:

- Whether the victim was involved in a police incident 3, 6 and 12 months after the initial report was filed, the nature of the incident(s), the identity of the repeat perpetrator, the action taken by the police and the DASH risk assessment for each recorded incident.

This administrative data was collected from two main sources, CIS and GENIE.<sup>12</sup> Additionally information was also taken from the detailed reports filled out by police engagement workers. The 3, 6 and 12 month police incidents were recorded from GENIE and Niche (a police records management system that replaced CIS at the end of April 2015). Data collection was done by the evaluation team and research assistants hired for this task.

Data collection and data merging were conducted based on the unique crime reference numbers originating from our random sample. After the data collection was completed, the

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<sup>12</sup> The GENIE system was replaced by Niche in April 2015.

dataset was anonymised and this number was replaced by a unique ID given by the primary researcher.

We supplemented these data with information from the Police National Database (PND), which allows sharing of intelligence across all UK police forces and criminal justice agencies. Access to the PND is highly restricted, even within the police force. For this reason, a specially trained and licensed police officer collected the data, and authorization was provided, for the research project, for every access to the PND. This officer was blind to the treatment status of individual cases.

From the PND we collected information on whether a perpetrator was arrested by police during or following a DV incident, whether a perpetrator was charged by the CPS, and whether a perpetrator was sentenced in court (and the details of sentencing). Information on prosecution and court outcome for perpetrators was accessed more than 24 month after the initial incident, to ensure that criminal justice proceedings are completed. We linked the information from the different databases by crime reference number, and cross-checked the linkage through the date of the incident.

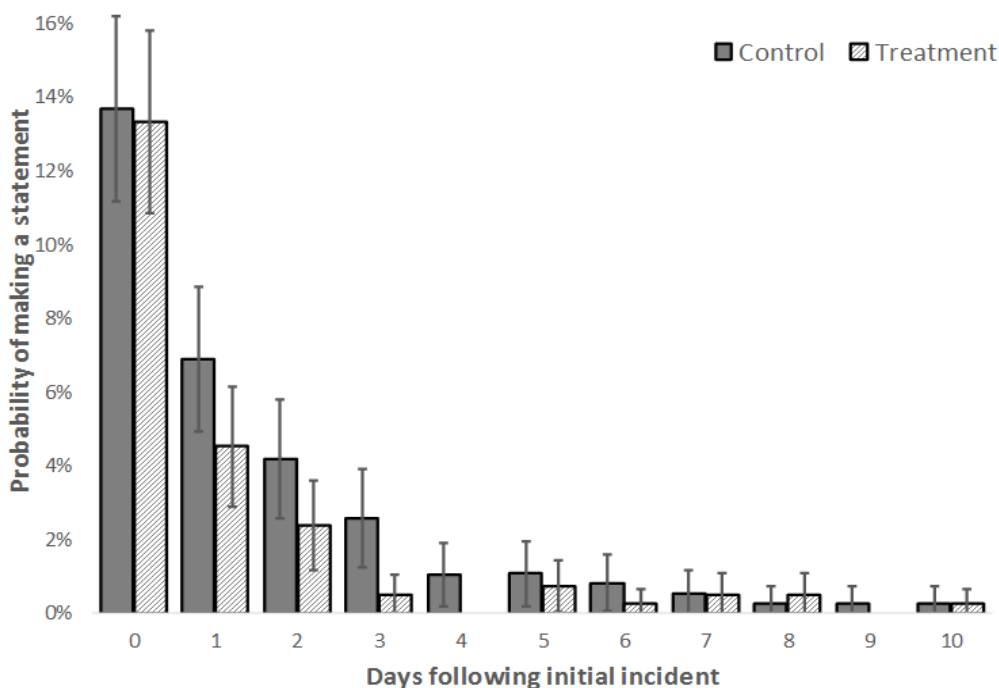
***Caption 4: Victim statements, criminal sanctions, and repeat offences***

- **The Project 360 intervention led to a decrease in the number of witness statements made by victims to police.** Victims in the treatment group were 21% less likely to provide a witness statement than were victims in the control group. Consistent with this being attributable to the intervention, the decline is due to differences in statement making after the initial police visit.
- **The intervention was not associated with any change in perpetrator arrests, charges or sentencing.** Despite the strong positive correlation between a victims' statement and criminal sanctions, the Project 360 intervention did not lead to a significant change in any actions taken against the perpetrator.
- **The intervention was associated with fewer statements retracted by victims.** Of those who made a statement, victims in the treatment group were 27% less likely to retract than victims in the control group.
- **The intervention was not associated with a notable change in repeat incidences of domestic violence recorded over a one-year period.** There was no significant change in the number of instances of domestic violence recorded by police. However, we found weak evidence to suggest that the severity of future incidents (as measured by risk assessment and arrests) was lower for the treatment group than for the control group.

***Victim statements***

Here, we examine the effect that the Project 360 intervention had on the propensity for victims to provide a witness statement to police. Statements are an important step in the process of victim engagement with the justice process. To illustrate this, we summarise actions taken by the police according to victim statement provision (see Table 8 in the Appendix). In cases in which a statement was not provided, only 8.1% resulted in an arrest (3.5% for *arrest and charge* and 4.6% for *arrest and no charge* combined). This compares to a 69.2% arrest rate for cases where a statement is made at the initial police visit and a 46.5% arrest rate for cases where a statement is made after the initial police visit. Caution should be

taken in inferring too much about the causal nature of statements on arrests from these numbers. It is possible statements are made in more serious incidences, which are always more likely to result in an arrest. However, this table suggests that victim statements play an important role in the police taking action against the perpetrator.



**Figure 3:** Probability of making a witness statement by days since the initial incident.

Notes: Bars reflect 95% confidence interval. Probability is conditional on having not made a statement on any previous day since the initial incident. Day 0 denotes the initial police callout.

The key findings for the impact of Project 360 on statement provision are reported in Table 9. We find that the treatment group is 6.2 percentage points less likely than the control group to provide a victim statement. This effect is statically significant and represents a 23% decrease compared to the mean over both groups. Considering that 49% of those in the

treatment group did not engage with the intervention, this corresponds to a 12.1 percentage point decrease in statement provision among those who engaged.<sup>13</sup>

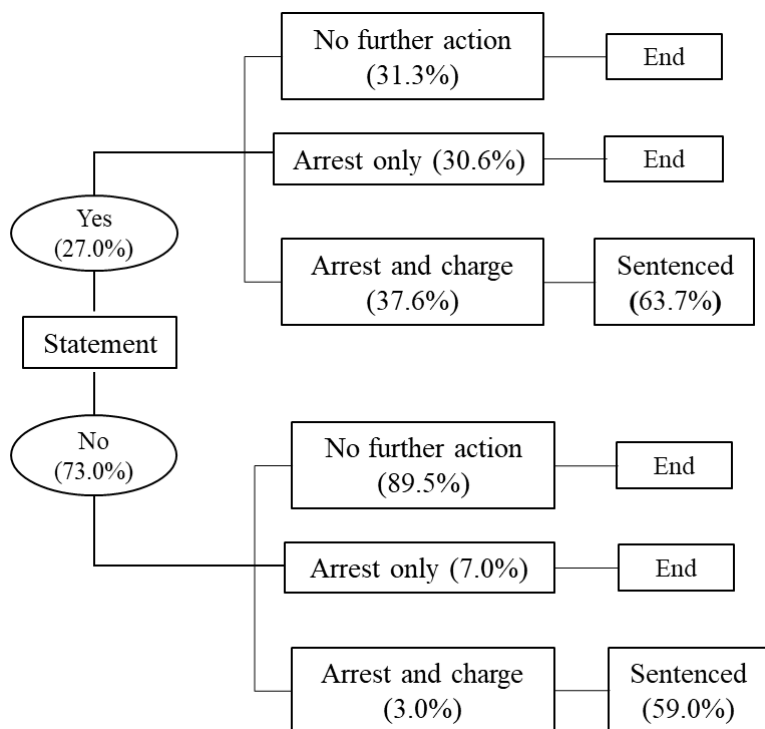
The difference in statement provision between the treatment and control groups is attributable to victims who make statements after the initial police visit, rather than those made during the initial police visit. Just under half of all statements are made during the initial callout. There is no significant difference between the treatment group and control group for the proportion of victims who make statements during the initial police callout, as illustrated in Figure 1. However, victims in the treatment group are 6.8 percentage points less likely to make a statement in the days following the initial police callout.

We find evidence that the intervention led to differences in the overall effectiveness of statements that are made. Statement retraction is 5.2 percentage points lower in the treatment than in the control group. Further, for statements made, arrest rates are 10.8 percentage points higher in the treatment group than the control group. This corresponds to a 17% increase in arrests for statements. These results suggest that the intervention may have led to a more effective use of the statement process.

We gain an additional insight by looking at statements according to the level of engagement for the treatment group. In the fourth, fifth and sixth rows of Table 9, we report statements made by the treatment group for those who do not engage (14.9%), those who engage by phone only (39.8%) and those who engage in face-to-face meetings (24.2%). We again caution against attributing differences in statements to the level of engagement, as these may reflect differences in the underlying cases that we cannot control for. However, it is interesting that those with a seemingly lower level of engagement (i.e. over the phone) also have the highest level of statement provision. Victims who have face-to-face meetings with engagement workers are about 38% less likely to make statements than victims who engage by phone only.

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<sup>13</sup> This can be calculated as a *local average treatment effect* using an instrumental variables estimator. See Angrist (2006) for details.



**Figure 4:** Arrest, charge and sentencing by victim statement provision.

Notes: Percentages correspond to the probability of each event conditional on the position in the tree. *End* nodes indicate no further actions was taken with respect to the case. Percentages calculated using data from the cases in the subject pool.

Figure from Foureaux Koppensteiner, Matheson, and Plugor (2019).

**Sanctions against the perpetrator**

There is a strong correlation between the provision of a statement by a victim and the progression of a case through the criminal justice process. This is demonstrated in Figure 4. No further action, beyond the initial callout, is taken in 89.5% of cases for which the victims does not provide a statement to police. This number drops to 31.3% in cases where a victim provides a statement. For this reason, that the Project 360 intervention decreases statement provision should lead us to be concerned that it will also decrease criminal sanctions against perpetrators.

We find no evidence that the intervention lead to a significant decrease in criminal sanctions against perpetrators (Table 8 in the Appendix). Arrest by police took place in 27.2% (control) and 25.2% (treatment) of all cases, a relatively small and statistically insignificant 1.1



percentage point difference. The percent of cases for which a perpetrator is charged by the Crown Prosecution Service—12.5% (control) and 13.1% (treatment)—and or sentenced by the court—7.6% (control) and 8.3% (treatment)—are almost identical across treatment and control.

### ***Repeat offences***

Here we discuss the findings for repeat police incidents for the treatment and control group. We tracked the number of repeat police callouts, by victim name, over a 24-month period. Detailed results are reported in tables 9, 10, and 11.

Over the 24-month period following the intervention, more than 75% of all victims experienced at least one repeat police callout for domestic violence, with an average of 2.7 (control) and 3.0 (treatment) reported domestic incidence per victim (Table 9). Although the treatment group has more reported incidents, the difference between treatment and control is small and not statistically different from zero. Similarly, the proportion of households which experienced at least one domestic incident over the 24-month period differs between the two groups by 3.0 percentage points: 74.9% for control and 77.8% for treatment. Again, we cannot conclude that there is a difference in the proportion of repeat visits between the two groups. This result does not change when we look at the probability of a victim experiencing a repeat police callout at 3, 6 and 12 months.

We also look at changes in the timing of repeat police callouts (Table 10). That is, did the intervention lead to a change in how quickly future incidents are reported? The average time until the first repeat is 146 (control) and 142 (treatment) days from the initial incident. The difference in timing is not statistically significant, nor does it differ significantly when we look at timing until the second to fifth repeat. We also look at timing of repeats restricting to victims who experienced five repeats over the 24-month period. The time between each police callout is roughly 75 days, and this does not significantly differ between the treatment and control group.

The intervention did not appear to result in a meaningful change in the recorded number, or timing, of domestic incidences. However, concluding that the intervention did not impact domestic violence in the household is complicated by the fact that the intervention may have

two opposing effects: 1) decreasing actual violence in the household (leading to a smaller number of recorded cases) 2) increasing victim willingness to report (leading to a higher number of recorded cases). It is possible that these two effects cancel each other out, resulting in the same number of reported incidents. If this is happening, we may see a decrease in the severity of the instances reported to police (as violence has declined, but victims are more willing to report less severe violence) and possibly more frequent reporting of incidences other than domestic violence. We examine this possibility by looking DASH assessments and arrests in domestic instances (see Table 11) for repeat incidents in the first year following the initial incident.

An increase in victim willingness to report may lead to less severe incidents being reported than were previously unreported. An attempt was made to compare the severity of domestic incidents by looking at 1) the number of risk factors (out of a possible 24) marked as affirmative on the DASH assessment form by responding officers<sup>14</sup>, 2) the proportion of DASH assessments that are *high risk*, and 3) the proportion of incidents in which an arrest was made. We look at each of the first to the fifth<sup>15</sup> callout following the initial incident. Overall, we find that DASH assessments involve 6.0 (control) and 5.6 (treatment) affirmative DASH risk factors. This represents a 6.8% decrease in the number of 'affirmative' categories in the DASH assessment. Although this difference is non-trivial in magnitude, it is not statistically different from zero. The proportion of high risk DASH scores over the one-year period, 12.3% (control) and 12.2% (treatment), is almost identical between the two groups. A similar pattern is seen in the proportion of arrests made in future incidents. Over the entire year, 45.7% (control) and 42.6% (treatment) of victims are involved in at least one case for which the perpetrator is arrested. While the proportion for the treatment group is consistently lower than that of the control group, most differences are not statistically distinguishable from zero.

These results suggest that the intervention had a small positive, but statistically insignificant, effect on future reporting of domestic incidents to police. We do not find evidence that the intervention led to changes in the timing or the severity of repeat reported domestic violence.

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<sup>14</sup> Note that this is opposed to the 3-point scale for level of risk. Looking at the number of affirmative responses provides a finer measure by which differences can be measured.

<sup>15</sup> Sample sizes beyond the fifth police callout are too small for accurate estimates.

## 8. Discussion of results

Here, the key findings of the Project 360 evaluation are summarised and discussed.

Some broad findings are worth highlighting. First, 65% of victims contacted accept help from an engagement worker.<sup>16</sup> Considering that engagement workers cold-call the victims, and that victims are often negatively viewed as being uncooperative or unwilling to support police action,<sup>17</sup> this is a notable take-up rate. Second, based on the survey results, victims receiving the intervention report a) higher overall satisfaction with police services, b) worsening stress, and c) better quality of life overall compared to victims who did not receive the intervention. Furthermore, victims who received the intervention are less likely to report being in contact with the perpetrator and more likely to report having visited their GP as a result of the incident. Victims in the treatment group state that their likelihood of reporting future incidents to police increased as a consequence of the intervention.

This final result is particularly important, as under-reporting is a serious concern for both police and domestic violence support agencies. As part of their report, HMIC conducted an online survey of victims of domestic violence and found that 46% of survey respondents had never reported domestic abuse to the police. Of these, 30% of survey respondents state that the reason is due to 'lack of trust or confidence in the police' (HMIC, 2014, p.31). The preliminary findings suggest that the service provided by an engagement worker may significantly improve this outcome.

The survey finding that stress increases for the treatment group is not surprising if one considers that some victims who receive the intervention will take steps to separate from an abusive partner or make other major life changes.

It is important to be cautious about the interpretation of the survey results. In particular, we need to consider the possibility that the intervention may influence survey responses without influencing the latent outcome. For example, a victim in the treatment group may feel like they are letting down the engagement worker if they truthfully report they are still in contact with the perpetrator. A victim in the control group does not have this specific incentive to

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<sup>16</sup> This figure excludes victims with whom the engagement worker was unable to make contact.

<sup>17</sup> In their victim survey, the HMIC reports that in 56% of 600 reviewed cases, victims did not support police action (HMIC, 2014; p.52).

mis-report their perpetrator contact. If this is the case, we would incorrectly conclude that the intervention leads to victims breaking contact with the perpetrator. However, it should be noted that several measures in the surveying process have been taken to minimise the potential for such a bias. In particular, the survey was conducted by a specialised survey team of the police, and the evaluation team communicated that the survey results would be used for exclusively for research purposes.

One of the expectations of the Project 360 intervention, prior to the evaluation, was that victims would be more likely to provide a statement to the police. The finding that the intervention leads to a decline in the provision of witness statements made by victims was, therefore, unexpected. This highlights the benefit of the randomised-control design, as this result would not have been observed without an experimental analysis. It also highlights some of the complexities in assisting victims of domestic violence.

In Foureaux Koppensteiner, Matheson, and Plugor (2019) we evaluate the decline in statement provision in detail. We find substantial evidence that the bespoke nature of the intervention allows victims to substitute between making statements and seeking help from non-police support services. The finding that the intervention did not lead to a corresponding decrease in criminal sanctions suggests that those victims who forgo making a statement were unlikely to see actions taken against their perpetrators. This will happen if the substantial barriers that exist in accessing non-police services have been putting off victims who are seeking the support these services offer, and instead utilise the police services for help. By reducing these barriers, the Project 360 intervention helps victims to access the services that are best suited to their needs. This is re-enforced by evidence that Project 360 is associated with a decrease in statement retractions and an increase in statement-arrest rates, suggests that statements are being made more effectively (see Table 8).<sup>18</sup>

## **9. The cost of Project 360**

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<sup>18</sup> In Foureaux Koppensteiner, Matheson, and Plugor (2019) we examine an alternative hypothesis that the time laps between the initial contact by the engagement worker and the scheduled face-to-face visit may create a “cooling off” period, over which victims become less willing to provide a statement. We find that the data do not support this hypothesis.

Here, we provide a brief overview of the incremental spending associated with Project 360, derived from the six-month period between November 2014 and April 2015, and calculate the per-engaged victim cost. The primary incremental cost from the implementation of Project 360 arises from the labour involved. This comprises three full-time engagement workers, at a total cost of £35,217, and a part-time supervisor and programme coordinator, at a total cost of £7,333. An estimated £2,550 was spent on car hire, fuel and parking. Finally, £200 was spent on security upgrades for victims. The total estimated incremental cost over the six-month period for Project 360 was £45,300.<sup>19</sup>

Over this period, the three engagement workers were assigned 510 cases, which works out at 4.3 cases per working day, or just over one case per worker. From these cases, contact was successfully made with 402 victims, 260 of whom engaged with the intervention. Based on this, we can work out the Project 360 cost of £174 per victim engagement. This cost may be expected to come down over time as engagement workers and supervisors learn new and more efficient processes for delivery of the service.

## **10. Final conclusions and recommendations**

These results of this study present an opportunity for second responder programmes modelled around Project 360 to address concerns outlined in the 2014 HMIC report. It also sheds light on some areas in which the programme can be improved in future implementations. Here we provide an overview of the recommendation that follow from the results of this study.

**Recommendation 1:** A second responder programme, modelled around Project 360, should be rolled out as standard practice in police forces that would like to see improvements in the relationship between police and victims of domestic violence, particularly in cases categorised at standard and medium risk.

**Recommendation 2:** The intervention should be rolled out to repeat victims who have experienced fewer than three previous instances in a 365-day period. This would allow for police-victim relationships to be strengthened earlier in the cycle of domestic violence.

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<sup>19</sup> It should be noted that this number does not include costs associated with incremental office resources, including desk space, telephones and computers for the Project 360 workers.

**Recommendation 3:** In cases in which children are involved, more focus should be placed on future implementations to work with schools. Working with schools provides a real opportunity for change. School administrators stated in interviews that they had a real need for more information and cooperation to identify and assist students who are exposed to domestic violence at home. The engagement workers, with access to information from police and local authorities, can provide this information in a secure and standardised framework to each of the schools' Designated Senior Person.

**Recommendation 4:** The intervention should be available anytime a household experiences domestic violence. The trial was only designed to estimate the impact of a single intervention. It is reasonable to expect that through continuous work with engagement workers, we may see a change in patterns of abuse and crime. Many of these households have a long history of abuse, and they may need multiple attempts of engagement over time provided through an intervention such as Project 360.

**Recommendation 5:** Efforts should be made to continue the experimentally designed study of future interventions. There is still much to be learned about how policies can be designed in the future to address better the needs of victims of domestic violence. Randomised control trials provide a gold-standard to provide policy-relevant, and scientifically robust, evaluation. Implementing innovative policies and interventions without a rigorous evaluation in place is a serious missed opportunity to identify what works in addressing domestic violence.

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## Appendix 1. Tables

Table 1: Sample size by month and treatment group

	Treatment		Control	
	Total	Surveyed	Total	Surveyed
November	107	20	112	15
December	127	20	89	14
January	90	22	100	20
February	61	17	70	22
March	77	22	77	22
April	48	9	57	11
<b>Total</b>	<b>510</b>	<b>110</b>	<b>505</b>	<b>104</b>
Percent surveyed	21.6%		20.6%	

*Notes:* This table reports the number of cases, and the corresponding number of victims surveyed, by month of entry into the study subject pool. Difference in percent surveyed between treatment and control group (0.97 percentage points) not statistically different than 0 at a 90% significance level. November count includes a small number of cases from the end of October.

Table 2. Timing of face-to-face visits with engagement workers

Days since initial callout	Number of visits	Proportion of visits
1	44	34.66
2	13	10.23
3	12	9.45
4 to 7	42	33.08
8 to 21	12	9.45
> 26	4	3.16
Total	127	100

*Notes:* This table reports the number of “engaged” treatment group victims who had a face-to-face visit with an engagement worker, by the number of days from the initial police callout to the visit. The column *Proportion of visits* shows the percent of all face-to-face visits that took place in the corresponding period.



Table 3: Summary statistics for treatment and control groups

	<i>Victim characteristics</i>			<i>Perpetrator characteristics</i>				<i>Household characteristics</i>		
	<i>Treatment</i>	<i>Control</i>	<i>Difference</i>	<i>Treatment</i>	<i>Control</i>	<i>Difference</i>		<i>Treatment</i>	<i>Control</i>	<i>Difference</i>
Female (proportion)	0.888	0.857	0.031 (1.474)	0.139	0.138	0.001 (0.041)	Same victim and perpetrator (first recorded incident)	0.422	0.471	-0.049 (1.567)
Age	33.929	34.984	-1.055 (1.373)	33.028	33.392	-0.364 (0.489)	Intimate partner DV	0.737	0.772	-0.035 (1.296)
White (proportion)	0.844	0.835	0.008 (0.357)	0.803	0.819	-0.016 (0.612)	Parent/child DV	0.231	0.196	0.035 (1.373)
Unemployed (proportion)	0.535	0.511	0.024 (0.753)	0.440	0.520	-0.081 (2.164)*	Victim and perpetrator live together	0.532	0.593	-0.060 (1.907)*
Domestic cases (365 days)	2.330	2.259	0.071 (0.738)	2.226	2.248	-0.022 (0.176)	Children in the household	0.586	0.570	0.016 (0.517)
Registered domestic cases	11.720	10.721	0.999 (1.461)	11.891	10.727	1.163 (1.789)*	Number of children†	1.923	1.983	-0.060 (0.734)
Risk assessment score	1.275	1.280	-0.005 (0.136)							

Notes: This table reports variables means for cases in the *treatment* group and the *control* group. Column *difference* reports the difference in group means, the t-statistics (reported in parenthesis) corresponds to the hypothesis that difference between treatment and control mean is 0. \* indicates difference is statistically significant at a 10% level of significance. †Number of children is conditional on having at least one child. N=1004.

Table 4: Engagement by characteristics (treatment group only)

		<i>Perpetrator</i>			
		Male	Female		
<i>Victim</i>	Sex				
	Male	44.8 (29)	29.6 (27)		
	Female	54.3 (405)	34.9 (43)	{0.009}***	
		<i>Perpetrator</i>			
<i>Victim</i>	Age	<25	25–39	40+	
	<25	30.4 (46)	49.2 (61)	68.4 (19)	
	25–39	50.0 (38)	50.7 (146)	55.3 (47)	
	40+	61.5 (39)	55.0 (40)	50.0 (68)	{0.128}
		<i>Perpetrator</i>			
<i>Victim</i>	Employment	Employed	Unemployed		
	Employed	59.5 (116)	44.6 (47)		
	Unemployed	52.2 (90)	39.8 (113)	{0.022}**	
<i>Household characteristics</i>					
<b>Ethnicity†</b>					
	White Europ.	49.4	(421)		
	Asian	71.4	(49)		
	Other	51.4	(35)	{0.014}***	
<b>Intimate partners (victim and perpetrator)</b>					
	No	50.9	(118)		
	Yes	50.3	(376)	{0.912}	
<b>Living together (victim and perpetrator)</b>					
	No	47.4	(232)		
	Yes	53.4	(264)	{0.183}	
<b>Children in the household</b>					
	No	46.7	(210)		
	Yes	54.6	(297)	{0.080}*	

*Notes:* This table reports the percent of treatment group in each category, which engaged with intervention. Number in parenthesis reflects the of treatment-group cases number in each categories. Number in braces reflects the p-value corresponding to a test of the hypothesis that engagement rate between characteristic groups is equal. \* indicates groups are significantly different at a 10% level of significance.

Table 5: Victim survey, selected questions for *police satisfaction*

	<i>Treatment (n=110)</i>		<i>Control (n=104)</i>		<i>Difference</i>		
<i>Police satisfaction and engagement</i>	Satisfied	Dissatisfied	Satisfied	Dissatisfied	Satisfied	Dissatisfied	
Satisfaction with police handling of case <sup>†</sup>	0.796	0.117	0.729	0.206	0.067 (1.140)	<b>-0.089*</b> (1.757)	↑
My opinion of police has <sup>‡</sup> ...	Improved	Worsened	Improved	Worsened	Improved	Worsened	
	0.222	0.107	0.271	0.131	-0.049 (0.781)	-0.024 (0.536)	—
My likelihood of reporting a future incident has <sup>‡</sup> ...	Increased	Decreased	Increased	Decreased	Increased	Decreased	
	0.505	0.097	0.355	0.150	<b>0.150**</b> (2.207)	-0.052 (1.152)	↑

Notes: This table reports mean values from victim survey for treatment and control groups. T-statistics, reported in parenthesis, correspond to the hypothesis that difference between treatment and control is 0. \* indicates difference is statistically significant at a 10% level of significance. “Improved” or “worsened” is relative to before the incident that triggered selection into the study. Arrows indicate a net increase (↑) or decreases (↓) in outcome for treatment group relative to the control group.

Table 6: Victim survey, selected questions for *actions taken*

	<u>Treatment (n=110)</u>	<u>Control (n=104)</u>	<u>Difference</u>	
<i>Actions taken</i>	Affirmative	Affirmative		
Currently in contact with perpetrator	0.385	0.583	<b>-0.199*</b> (2.939)	↑
Visited GP as a result of incident	0.408	0.287	<b>0.121*</b> (1.849)	↑
Visited A&E as a result of incident	0.087	0.037	0.050 (1.500)	↑
Feel confident accessing services <sup>†</sup>	0.870	0.870	0.000 (0.000)	↓
Accessed one or more service <sup>†</sup>	0.687	0.600	0.087 (1.170)	↑

*Notes:* This table reports mean values from victim survey for treatment and control groups. T-statistics, reported in parenthesis, correspond to the hypothesis that difference between treatment and control is 0. \* indicates difference is statistically significant at a 10% level of significance. “Improved” or “worsened” is relative to before the incident that triggered selection into the study. Arrows indicate a net increase (↑) or decreases (↓) in outcome for treatment group relative to the control group. †Services are defined as any non-police support services, excluding health services (general practitioner or accidents and emergency).

Table 7: Victim survey, selected questions for *perceived wellbeing*

	<i>Treatment (n=110)</i>		<i>Control (n=104)</i>		<i>Difference</i>		
	Improved	Worsened	Improved	Worsened	Improved	Worsened	
<i>Safety and wellbeing</i>							
Personal safety	0.590	0.086	0.523	0.055	0.068 (0.992)	0.031 (0.876)	↑
Life control	0.524	0.143	0.578	0.119	-0.054 (0.794)	0.024 (0.510)	↓
Stress level	0.333	0.286	0.505	0.193	<b>-0.171*</b> (2.564)	0.093 (1.599)	↓
Quality of sleep	0.267	0.276	0.303	0.183	-0.036 (0.582)	0.093 (1.616)	↓
Mental health	0.286	0.219	0.278	0.222	0.008 (0.128)	-0.003 (0.055)	↓
Family life	0.471	0.077	0.435	0.204	0.036 (0.524)	<b>-0.127*</b> (2.680)	↑
Quality of life overall	0.490	0.154	0.389	0.157	0.101 (1.490)	-0.004 (0.071)	↑

Notes: This table reports mean values from victim survey for treatment and control groups. T-statistics, reported in parenthesis, correspond to the hypothesis that difference between treatment and control is 0. \* indicates difference is statistically significant at a 10% level of significance. “Improved” or “worsened” is relative to before the incident that triggered selection into the study. Arrows indicate a net increase (↑) or decreases (↓) in outcome for treatment group relative to the control group.

Table 8: Victim statement provision and the criminal sanctions process

	Treatment	Control	Difference
<i>A. Statement retracted by victim</i>			
Statement retracted	0.140	0.192	-0.053 (1.153)
Retraction (Statement at initial callout) <sup>†</sup>	0.235	0.275	-0.038 (0.522)
Retraction (Statement after initial callout) <sup>†</sup>	0.019	0.122	-0.101 (2.065)*
<i>B. Perpetrator arrested by police</i>			
Arrest	0.252	0.263	-0.011 (0.393)
Arrest (statement made) <sup>†</sup>	0.744	0.636	0.105 (1.888)*
<i>C. Perpetrator charged by CPS</i>			
Charge	0.125	0.131	-0.006 (0.286)
Charge (statement made) <sup>†</sup>	0.397	0.371	0.022 (0.370)
<i>D. Perpetrator sentenced by courts</i>			
Sentence	0.076	0.082	-0.006 (0.353)
Sentence (statement made) <sup>†</sup>	0.240	0.245	-0.005 (0.109)

*Notes:* This table reports the proportion of cases in which we observe the corresponding event, for the treatment and control group. T-statistics, reported in parenthesis, correspond to the hypothesis that difference between treatment and control is 0. \* indicates difference is statistically significant at a 10% level of significance. †Values reflect mean for cases in which the victim provided a statement to police.

Table 9: Repeat police callouts by treatment group

	Probability of repeat			Number of repeats			Number of repeats (at least one)		
	Control	Treatment	Difference	Control	Treatment	Difference	Control	Treatment	Difference
3 months	0.360	0.361	0.000 (0.030)	0.575	0.657	0.057 (0.062)	1.563	1.662	0.098 (0.097)
6 months	0.495	0.514	0.019 (0.031)	0.960	1.082	0.098 (0.087)	1.922	1.989	0.067 (0.119)
12 months	0.612	0.618	0.006 (0.031)	1.561	1.763	0.191 (0.130)	2.511	2.748	0.237 (0.162)
24 months	0.749	0.778	0.030 (0.027)	2.724	3.022	0.298 (0.216)	3.699	3.919	0.220 (0.250)

Notes: This table reports values reflecting repeat police callouts, involving the same victim as an initial police callout, at 3, 6, 12 and 24 months. *Probability of repeat* reports the percent of victims for which at least one repeat callout is observed. *Number of repeats* is the average number of repeat callouts observed. *Number of repeats (at least one)* is the average number of repeats observed, restricting cases to those for which at least one is observed in each period. T-statistics, reported in parenthesis, correspond to the hypothesis that difference between treatment and control is 0. \* indicates difference is statistically significant at a 10% level of significance.

Table 10: Timing of repeat police callouts by treatment group

	N	Days since most recent			Days since first (conditional on 5)		
		Control	Treatment	Difference	Control	Treatment	Difference
First repeat	753	146.414	141.997	-4.417 (12.513)	76.178	71.156	-5.022 (11.711)
Second repeat	552	126.393	114.777	-11.616 (18.229)	151.693	160.248	8.555 (19.038)
Third repeat	402	108.409	126.074	17.664 (22.491)	226.782	235.321	8.539 (22.065)
Fourth repeat	289	99.370	94.219	-5.151 (13.406)	307.347	303.651	-3.695 (23.457)
Fifth repeat	210	75.861	86.303	10.441 (15.517)	383.208	389.954	6.746 (26.927)

*Notes:* This table reports timing between repeat callouts. *Days since most recent* reflects the number of days that pass since the last police callout, at the first to fifth repeat callout. *Days since first (conditional on 5)* reflects the number of days that pass since the initial police callout restricting the sample to cases in which at least 5 repeats are observed ( $N=210$  in this panel). T-statistics, reported in parenthesis, correspond to the hypothesis that difference between treatment and control is 0. \* indicates difference is statistically significant at a 10% level of significance.

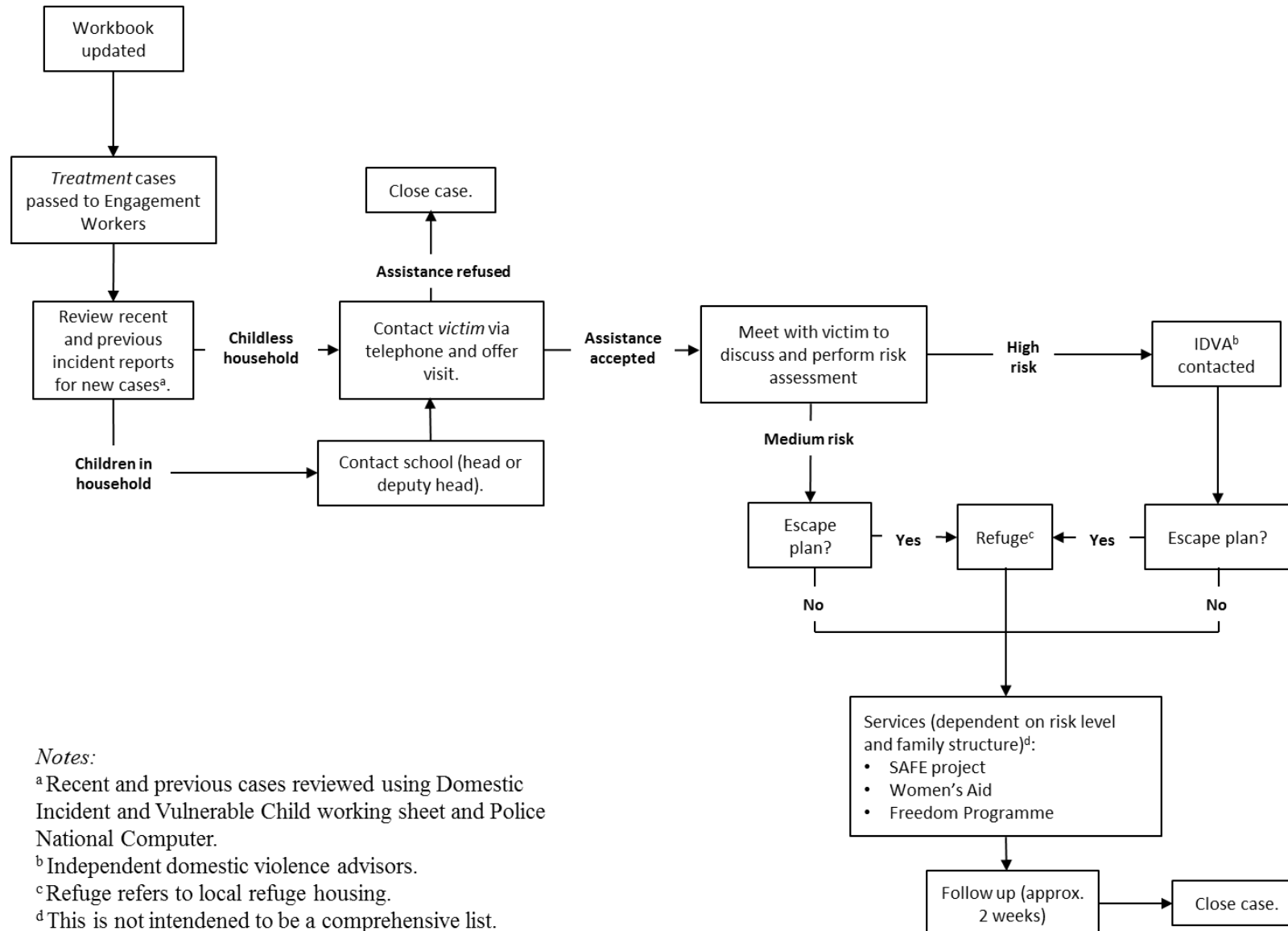


Table 11: Severity repeat police callouts by treatment group

	N	DASH score			High risk DASH			Arrests		
		Control	Treatment	Difference	Control	Treatment	Difference	Control	Treatment	Difference
First repeat	522	5.671	5.034	-0.637 (0.400)	0.065	0.089	0.024 (0.041)	0.276	0.259	-0.017 (0.035)
Second repeat	312	6.412	6.348	-0.065 (0.597)	0.101	0.063	-0.039 (0.046)	0.246	0.230	-0.016 (0.043)
Third repeat	191	6.671	7.248	0.577 (0.757)	0.089	0.091	0.002 (0.052)	0.275	0.315	0.040 (0.060)
Fourth repeat	105	8.452	6.492	-1.960 (0.964)*	0.108	0.018	-0.090 (0.055)	0.368	0.241	-0.127 (0.076)
Fifth repeat	65	8.231	7.513	-0.718 (1.316)	0.125	0.056	-0.069 (0.079)	0.357	0.333	-0.024 (0.100)
Average (1 yr)	522	6.039	5.629	-0.410 (0.358)	0.123	0.122	-0.001 (0.021)	0.457	0.426	-0.031 (0.039)

Notes: This table reports values, at the first to fifth repeat callout, reflecting a) the DASH score (out of a possible 24) given by responding officers, b) the proportion of cases which are assessed as high risk, and c) the proportion of cases in which the perpetrator is arrested. Row *Average (1 yr)* reflects average values for all repeats in the first year following the initial callout, arrests in this row reflect the proportion of victims who have a perpetrator arrested at least once in the year following.

Appendix 2. Engagement worker intervention flow



Notes:

<sup>a</sup> Recent and previous cases reviewed using Domestic Incident and Vulnerable Child working sheet and Police National Computer.

<sup>b</sup> Independent domestic violence advisors.

<sup>c</sup> Refuge refers to local refuge housing.

<sup>d</sup> This is not intended to be a comprehensive list.

### Appendix 3. Project researchers

Martin Foureaux Koppensteiner currently works as a Senior Lecture in Economics at the University of Surrey. He received his PhD in Economics from Queen Mary University of London, joining the University of Leicester in 2011, and the University of Surrey in 2018. His research focuses on the impact evaluation of public policies. In the past, he has analysed incentives in education, the determinants of violence against women, the effect of household finance on poverty and welfare, and the effect of education on fertility. His current research interests include the determinants and consequences of crime, and the economic impact of disease. He has an interest and expertise in Brazil and has worked with the Ministry of Education, the Ministry of Public Security and the Ministry of Health in Brazil, and is a consultant for the Inter-American Development Bank. In 2016, Foureaux Koppensteiner was awarded a Future Research Leaders grant by the ESRC. He previously received grants from the Wellcome Trust, the British Academy, ESRC-DFID and the IDB.

Jesse Matheson currently works as a Senior Lecture in Economics at the University of Sheffield. He received his PhD in economics from the University of Calgary, joining the University of Leicester in 2011, and the University of Sheffield in 2018. Matheson's research spans consumer choice, addictive behaviours and household poverty, with a focus on quantifying the impact of public policy on these issues. His research is published in peer-reviewed journals in the fields of economics and public health. Matheson has experience producing and publishing research with highly sensitive data (in work with Statistics Canada) and disseminating complex research results to a broad audience (in work with the Canadian Institute for Advanced Research).

Foureaux Koppensteiner and Matheson teach modules and workshops at the undergraduate and post-graduate level, and on quantitative methods for impact evaluations.

Réka Plugor currently works as a Lecture in Work and Employment at the University of Leicester. She received her PhD in Labour Market Research from the University of Leicester in 2014. She has a broad range of research interests located mainly within the sociology of work, education and youth. She conducts research on these topics from both theoretical and applied perspectives using qualitative, quantitative or mixed methods. Plugor has experience in working with large and complex datasets as well as highly sensitive data from narrative and life history interviews. She has published her work in Hungarian, Romanian and English, in policy reports, books and peer-reviewed journals.

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